

MISSOURI. Conservationist

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Telecheck Saves Time and Money

With the closing of spring turkey season, I was thinking about the Telecheck system and how that new technology has changed the way many do business inside and outside the Department.

The concept of Telecheck was first introduced as a savings in time and money for Missouri hunters. A survey of hunters indicated that they drove an average round trip of 32 miles to check a harvested animal. Naturally, other factors such as multiple people in a hunting party, checking multiple animals on one trip, etc., preclude us from knowing exactly how much is spent by the public to check their animals, but a conservative estimate is that a savings in excess of \$1.5 million is realized by reducing the travel to check stations. This amount doesn't even include what the hunters' time is worth.

In addition to saving hunters money, the Department's budget has also benefited. In 2003, the Department spent over \$782,000 on running and administering the check station system. This included direct payments to vendors and time spent by agency staff supplying and monitoring the check stations. That year 361,020 animals (both deer and turkey) were processed for an outlay of \$2.17 per animal checked.

In 2006, the overall cost of Telecheck was a little more than \$160,000 or about 45 cents per animal. Interestingly, the number of animals checked was within 200 animals of the 2003 number. The savings in 2006 as compared to 2003 equates to more than \$600,000. Part of this savings comes from reducing hours spent by conservation agents administering the check stations. The new system enables law enforcement personnel to check almost instantaneously on individual permits and harvest records,

which allows for more efficient enforcement of the regulations.

The new system has also allowed the Department to gather harvest information and make it available in near real time to both the public and staff. Managers now have online access to accurate harvest information that previously took weeks to process. The public used to be provided with season reports that were a snapshot of various time periods (these reports were collected by local conservation employees and then phoned in to the central office). Now these same reports are immediate with harvest information on a county by county basis.

Staff within the Administrative Services Division helped create and implement the Telecheck system, and recently they were acknowledged for their efforts. Last October, the Deer and Turkey Telecheck application was chosen to receive the Organization of Fish and Wildlife Information Managers award for the best Non-GIS Web-based Application. This is one of only two awards this organization presents to recognize

technology applications nationwide. The Telecheck application was a major team effort involving staff from Resource Science, Wildlife, Protection and Outreach & Education divisions in the Department and is an example of how behind-the-scenes people impact the business of conservation.



CARTER CAMPBELL is a 26-year veteran with the State of Missouri, with the last eight years at the Department of Conservation. Although much of his time is spent behind a desk at work, he enjoys the outdoors through camping and fishing adventures with his family.

Carter Campbell, administrative services division chief

OUR MISSION: *To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide for all citizens to use, enjoy and learn about fish, forest and wildlife resources.*











On the cover: Photographer Noppadol Paothong captured this image of a gray squirrel. To learn more about this mammal, including information on the hunting season, visit www.missouriconservation.org and search "squirrel."

Left: Learn how sampling our state's fisheries helps the Conservation Department set fishing regulations, starting on page 14.

NextGEN

This section reports on goals established in *The Next Generation of Conservation*. To read more about this plan, visit www.missouriconservation.org/12843.

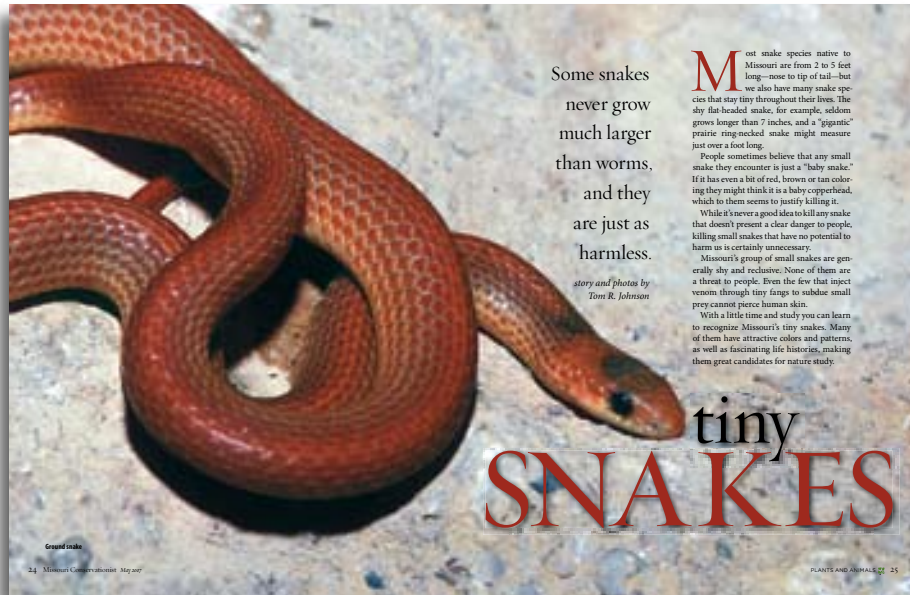
- 5  PLANTS & ANIMALS
- 6  PLACES TO GO
- 7  COMMUNITY CONSERVATION
- 8  OUTDOOR RECREATION
- 10  CLEAN WATER
- 11  HEALTHY FORESTS
- 12  LANDOWNER ASSISTANCE
- 13  CONSERVATION EDUCATION

FEATURES

- 14 **Counting Fish**
by Greg Stoner
Late-night arithmetic adds up to improved fishing.
- 20 **Treemendous Benefits**
by Ann Koenig, photos by David Stonner
Ten ways that trees improve the quality of our lives.
- 26 **Boy Scouts of America**
by Harold Kerns
Scouts have been doing "Good Turns" for conservation for nearly a century.

MISCELLANY

- 2 **Letters**
- 4 **Ombudsman**
- 4 **On the Web**
- 4 **On the TV**
- 32 **Hunting and Fishing Calendar**
- 32 **Contributors**
- 33 **Behind the Code**
- 33 **Agent Notes**
- 33 **Time Capsule**



Some snakes
never grow
much larger
than worms,
and they
are just as
harmless.

story and photos by
Toni R. Johnson

Most snake species native to Missouri are from 2 to 5 feet long—none to tip of tail—but we also have many snake species that stay tiny throughout their lives. The shy flat-headed snake, for example, seldom grows longer than 7 inches, and a "gigantic" prairie ring-necked snake might measure just over a foot long. People sometimes believe that any small snake they encounter is just a "baby snake." If it has even a bit of red, brown or tan coloring they might think it is a baby copperhead, which to them seems to justify killing it. While it's never a good idea to kill any snake that doesn't present a clear danger to people, killing small snakes that have no potential to harm us is certainly unnecessary. Missouri's group of small snakes are generally shy and reclusive. None of them are a threat to people. Even the few that inject venom through tiny fangs to subdue small prey cannot pierce human skin. With a little time and study you can learn to recognize Missouri's tiny snakes. Many of them have attractive colors and patterns, as well as fascinating life histories, making them great candidates for nature study.

tiny SNAKES

MO-MENTOS

It's great to see the brilliant pictures of wildlife and scenery of home in my favorite time of year. You never realize what a great place you live in until you leave it.

This might be the place of the Garden of Eden (Iraq), but it sure doesn't add up to a spring morning in Cooper County. It's good to see a piece of home. Thanks.

Sgt. Patrick Meyer, Camp Taji, Iraq

THE JOY OF FISHING

An expatriate Missourian of over 30 years, I moved to Alaska to enjoy the fishing. Regardless of whether one pursues king salmon or bluegill, the beautiful photo of the young boy that graces your "Contents" page [May] evokes the universal joy fishing brings to us all.

I hope that his line was soon taut with a fish!

John Erkmann M.D., Anchorage, Ak

QUITE A CHARACTER

Didn't the *Missouri Conservationist* feature or have pictures of a raccoon years ago? Seems like I remember one—a little, cartoon-style animal.

Wesley Miller, Truxton

Editor's note: The magazine did feature a raccoon cartoon character for a number of years. He was known as Consy Coon, and he sprang from the pen and imagination of Jim Keller who worked in our former Information Section. Consy made his first appearance in 1951 and



played a role in the magazine for the next 14 years, often appearing on the back cover. He presented monthly nuggets of conservation philosophy, tips and skills in a segment called "Consy's Scrapbook."

KINGDOM OF POOSEY

Having lived in Rolla and Sunrise Beach for 40 years, and traveling throughout Missouri, I never heard of Poosey Conservation Area until the April issue ["Places to Go," Pg. 6]. When was it established and why was it so named?

Clarence Posey, Indian Head

Editor's note: Poosey Conservation Area is in northwest Livingston County, 13 miles northwest of Chillicothe on Route A, 1 mile west of the Route W junction. The Conservation Department purchased the original 814-acre tract for Poosey CA in 1979 from Robert Daugherty. Additional purchases have increased the area's size to 5,738 acres.

This portion of the Grand River Valley was one of the last parts of Missouri yielded by the American Indians. In 1833, the last remnants of the Shawnee tribe left the area, opening the area to settlement by people of European extraction, who came here via Kentucky, Tennessee and Virginia. The settlers, who preferred forested tracts to open prairies, were attracted by plentiful natural supplies of food, fuel, water and building materials.

The rugged landscape reminded some of the settlers of the Poosey region in Kentucky, giving rise to the area's name. The area continues to be known as the "Kingdom of Poosey."

Poosey CA contains forests, grasslands, croplands, prairie, old fields and savanna. Facilities/features include boat ramps, a picnic area and pavilion, a fishing dock, firearms and archery ranges, numerous fishing ponds, Indian Creek Community Lake and Hawthorn Natural Area. This is a designated Important Birding Area.

For more information on Poosey CA, call 660-646-6122 or visit www.missouri-conservation.org/moatlas/a7935.



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Reader Photo

MISSOURI TIGERS

Nationwide, there are 147 species of tiger beetles, 21 of which live in Missouri. Many species have striking metallic colors and markings. Tiger beetles belong to the family Cicindelidae and are often found on sandbars, muddy banks and in glades and forest litter. Their presence or absence in an area can give clues about a habitat's health. Photo submitted by Mark J. Beckemeyer of Steedman.

on the WEB

This month check out our featured Web pages, or go online anytime to learn more about conservation at www.missouriconservation.org.



FALL HUNTING

www.missouriconservation.org/7442

Fall Deer and Turkey Hunting Information has been updated and is online. This booklet is available in standard HTML, as well as Adobe Reader PDF format.



DROUGHT STRESS

www.missouriconservation.org/14460

Frequent light watering is sufficient for lawns, but doesn't address the needs of trees during especially dry times. Watering can help to reduce the effects of stress.



ZEBRA MUSSELS

www.missouriconservation.org/8260

Zebra mussels are in Missouri. Learn more about this invasive species and what you can do to prevent them from spreading.



ASK THE OMBUDSMAN

Q: I'd like to buy quail to release on my property. Are there any regulations about this?

A: Yes. Primarily due to concerns about negative effects (disease, concentration of predators, genetic dilution), wildlife release and confinement is strictly regulated by the *Wildlife Code of Missouri*. See Chapter 9 for details.

There's no magic formula for ensuring lots of healthy quail. Pen-raised birds aren't suitable for sustained quail populations. It takes hard work and determination to do what it takes to provide food, cover and other habitat needs.

The efforts of farmers, landowners, the Department and cooperating state and federal agencies have been rewarded with an impressive list of recent habitat improvements: 15 million linear feet of native grass field borders have been installed in the last few years; there are more than 50,000 acres of wildlife-friendly CRP lands (in fact, Missouri just received an additional 10,000 acres of CP33—Habitat Buffers for Upland Birds); and approximately 70,000 acres of quail and grassland bird habitat have been created and are managed on conservation areas annually.

The Department's wildlife professionals are available to help landowners manage their land for quail and other wildlife by providing technical assistance, information on cost-share programs and detailed management plans—all free of charge. For more information, contact your local Department office or visit www.missouriconservation.org/14140. Another great resource is The Covey Headquarters newsletter and Web site at www.coveyheadquarters.com.

Ombudsman Ken Drenon will respond to your questions, suggestions or complaints concerning Department of Conservation programs. Write him at P.O. Box 180, Jefferson City, MO 65102-0180, call him at 573-522-4115, ext. 3848, or e-mail him at Ken.Drenon@mdc.mo.gov.

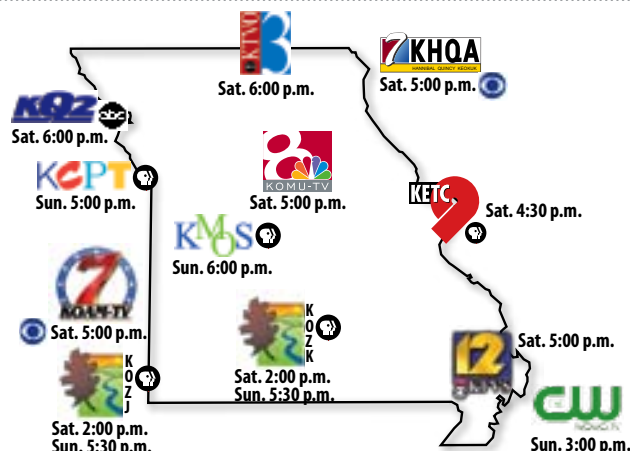
on the TV

For additional show information and video clips, be sure to visit

www.missouriconservation.org/8726.



Television
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nature
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Species of Concern

Pondberry



Common name: Pondberry

Scientific names: *Lindera melissifolia*

Range: Ripley County

Classification: State and federally endangered

To learn more about endangered species: www.missouriconservation.org/8227

THIS MEMBER OF the avocado family is related to Missouri's common shrub, spicebush. It clings to existence in a 1,000-mile crescent of sandy land that stretches from coastal North Carolina to the southeastern corner of Ripley County. The 37 scattered spots where it is known to survive are remnants of a habitat type that once was much more common in southeast Missouri. Thickets of the 3- to 5-foot-tall shrub thrive in sandy, swampy depressions amid bottomland hardwood forest. Most such places were logged, ditched and drained by the early 20th century. Today Missouri's sole surviving pondberry population is protected on Sand Pond Conservation Area. Tiny, drab, yellow flowers appear in March and April, and glossy, scarlet fruits mature in October. However, few pondberry plants grow from seed. Most arise from root runners.

New Gardening Book

Indispensable for native-plant gardeners.

The Nature Shop has a new book that native-plant gardeners will find indispensable. In 60 pages, *Tried and True Missouri Native Plants for Your Yard* catalogs 111 wildflowers, ferns, grasses, sedges, vines, shrubs and trees for every imaginable landscape use. Included are notes on growing needs of each plant. Gorgeous color photos help gardeners visualize future landscape plans. This item is available for \$6 plus shipping and handling, and sales tax (where applicable). To order, call toll free 877-521-8632 or visit www.mdcnatureshop.com.



Goopy and Fascinating

Bryozoans—gelatinous gobs mean high-quality water.

Each summer, thousands of floaters, anglers and bathers stumble across what look like miniature versions of The Blob. Those adventurous enough to pull the gelatinous masses out of the water discover they are surprisingly solid. Many send photos to the Conservation Department and ask "What the heck is this!" The answer is bryozoans—colonies of microscopic animals that grow on logs, rocks, vegetation, boat docks or other submerged objects. The animals secrete jelly-like coverings that can reach basketball size. Bryozoans are harmless. In fact, their presence indicates good water quality. They filter microscopic food out of the water, and cannot survive pollution or excessive muddiness.





Pro Photographer Secrets

Tips for photographing on conservation areas.

Engle Bluff Conservation Area, near Columbia, has great wildlife-photo opportunities in the summer.

American bitterns, least bitterns, soras and blue herons can be seen fishing. 1) Get there before sunrise to locate wading birds. Most animals are more active in the morning and evening when temperatures are cooler. 2) Approaching animals in your vehicle will yield the best close-up photos. 3) Keep your eyes and ears ready for songbirds, including indigo buntings and a variety of warblers.



Hot Dang, Fishin' in the City

Urban fishing lakes bring angling into town.

Once upon a time, fishing was a rural activity. Today, dozens of Missouri towns and cities have in-town fishing opportunities, thanks to the Conservation Department's Urban Fishing Program. The program began in St. Louis in 1969. Since then it has expanded to Kansas City, Springfield and dozens of other communities. Some urban fishing sites are in city parks. Others involve conservation areas or community lakes. The Conservation Department manages these waters and stocks fish ranging from trout in some lakes during the winter, to catfish, carp and bullheads in the summer. To find an urban fishing lake near

you, call the nearest regional conservation office (listed on page 3) or use the Conservation Atlas at www.missouriconservation.org/2930. Call the same offices for information about fishing clinics, or visit www.missouriconservation.org/4163.

Trail Guide



RUDOLF BENNITT CONSERVATION AREA



NAMED FOR ONE of the men who established the Conservation Department, Rudolf Bennitt CA covers 3,515 acres straddling Boone, Howard and Randolph counties. General of the Army Omar N. Bradley, the first

chairman of the Joint Chiefs of Staff, spent much of his childhood here. Most of the rolling terrain is forested. The Moniteau Wilderness Trail is open to hiking, biking and equestrian use. Currently under renovation, the trail passes by savannas, white-oak forests, tall-grass prairie and 48-acre Rudolf Bennitt Lake, which has a disabled-accessible boat ramp, fishing dock and restroom. The trail is loop-based to offer multiple routes. Some old trails are difficult to traverse. Trail and camping facility renovations began in 2006 and will continue for several years. Walk-in camping is permitted, and there is a 20-unit campground on County Road 2920 on the area's west side.

Trail: Moniteau Wilderness Trail—10 miles

Unique features: Childhood home of General Omar Bradley

Contact by Phone: 573-884-6861

For more information: www.missouriconservation.org/2930, and search "Rudolf"



TAKING ACTION

Conservation Area Checklist Project



Group featured: The Audubon Society of Missouri

Group mission: Dedicated to the preservation and protection of birds and other wildlife, the education and appreciation of the natural world and to effective wildlife and habitat conservation practices.

For more information about The Audubon Society of Missouri: Contact Julie Lundsted, 4904 Woodhaven Dr., Jefferson City MO 63109, phone 573-635-2976, e-mail jlundste@hotmail.com or go online at www.mobirds.org.

CACHE, or the Conservation Area Checklist project, is an asset to birds and birdwatchers. The Web-based database, created by the Audubon Society of Missouri and the Department of Conservation, tracks the occurrence of birds on Conservation lands. The data collected are used to enhance bird habitats and birding opportunities.

ASM President Mike Doyen describes CACHE as citizen conservation at its best. ASM members input information into the system about birds sighted during their visits to Conservation lands. The Department of Conservation uses the bird monitoring information to create or adjust land management plans to help restore or maintain healthy bird populations.

Birders can use CACHE as a source of information for birdwatching locations. To view information in the CACHE database visit www.mobirds.org.

Gardens and Wildlife

Get this guide on how to prevent wildlife damage.

Prevent your garden from becoming a buffet for local wildlife. Get a copy of the Department of Conservation brochure *Gardens and Wildlife*. The publication is ideal for gardeners who want non-lethal methods for protecting crops from a wild animal's menu. The easy-to-follow guide gives instructions on the use of repellents, electric fences and exclusion fences. To receive a free copy of the guide write to: Missouri Department of Conservation, *Gardens and Wildlife*, P.O. Box 180, Jefferson City, MO 65102 or e-mail pubstaff@mdc.mo.gov.



Saving Streams

Many join together for the sake of this Ozark gem.

The Ward Branch Preservation, Restoration and Enhancement Project is providing a natural solution for a man-made problem. The stream management project seeks to correct problems created by urbanization along the southwest Missouri stream.

The Ward Branch project was created by experts from Greene County, the Department of Conservation, City of Springfield, Ozarks Greenways and Missouri State University to address flooding and erosion damage caused by storm runoff. Construction along the stream of buildings, streets and other surfaces that are unable to slow or absorb water created the problems, so partners in the improvement project are working to combat the problems by returning the stream to a more natural and stable condition.

Information learned from the project will be used to help plan future Ozarks stream restorations.





Hunting Season Preparation

Fall is approaching, take hunter ed now to get ready.

Prepare now for upcoming hunting seasons by attending a hunter education certification course. Hunter ed provides a foundation in hunting safety and ethics that helps hunters focus on more than just harvesting game. The 10-hour course teaches participants how to handle firearms safely, hunting ethics and much more. The safety course is required for anyone born on or after Jan. 1, 1967 and anyone who



goes afiel to assist a youth who hunts with a youth permit. For details on hunter education training and information on course dates, visit www.missouriconservation.org/8821.

Preference Points

New managed deer hunt drawing procedure.

A new weighted random drawing procedure will help increase hunters' chances of being selected in future hunting seasons for Department of Conservation managed deer hunts. In the past, participation was allotted through a random drawing in which all applicants had an equal chance. Beginning this year, each unsuccessful applicant will earn one preference point that will entitle the applicant to two entries the next time the hunter applies for a managed deer hunt. Hunters will continue to accumulate preference points—one for each unsuccessful application year—until they are drawn. Hunters have through Aug. 15 to apply for managed deer hunts. You may apply only for one hunt. Find details on



the managed deer hunt application process and the new weighted random drawing procedure at www.missouriconservation.org/7440.

Shooting Practice

Scout it Out



Name: Andy Dalton Shooting Range and Training Center Complex

Location: Greene County Farm Road 61, 2.5 miles south of US Highway 160, 4 miles west of Willard

For more info: 417-742-4361 or www.missouriconservation.org/2930 and search "Andy"



SOUTHWEST MISSOURIANS LOOKING to sharpen shooting skills should set their sights on the Andy Dalton Shooting Range and Training Center Complex. Located on Bois D'Arc Conservation Area near Springfield, the Department of Conservation range is one of the state's best-equipped and most modern public ranges. It offers a 100-yard baffled,

rifle/pistol range, four trap and skeet fields, a shotgun patterning range and a gravel archery range trail with 3-D targets. A \$3 fee is charged for use of the range facilities. Assistance with sighting in firearms, handgun training and shotgun reloading are among the services provided free-of-charge by the range staff.

The Dalton range is open five days a week on a first-come, first-served basis, but hours are subject to change due to scheduled activities. For full details on fees and regulations at the range contact the Training Center staff at 417-742-4361.

The Conservation Department maintains more than 60 shooting facilities. Five are outdoor skills training centers with full-time staffs. Learn more about ranges in your area at www.missouriconservation.org/2337.



Camp on Conservation Areas

Find an area near you to plan an inexpensive getaway.

Get away from the hustle and bustle of everyday life, without breaking the bank, by taking a camping vacation at a Missouri Department of Conservation area. Most areas offer only primitive-style camping with no hookups and few amenities, making them ideal for those who enjoy a challenge. No reservations are required for camping on Conservation lands.

Campers who enjoy roughing it should consider "walk-in camping." Walk-in sites provide no amenities and often require campsites to be at least 100 yards from parking lots and roads.

Designated Primitive Camping Areas with Defined Campsites generally offer a gravel parking pad or mowed area designated as a camping site. The areas also may have picnic tables, fire grates, garbage cans and privies. Designated Primitive Camping Areas without Defined Campsites typically allow camping on a gravel or dirt parking lot or areas adjacent to the parking lot.

When camping on Conservation lands remember to leave behind only footprints, respect wildlife and properly dispose of all trash. View the Department's online atlas at www.missouriconservaion.org/2930 for information on camping opportunities on Conservation lands near you.



Summer Show

Compass plants are in bloom now through September.

Virtually every direction you travel this month in Missouri will lead you to blooming compass plants. You can view the showy plants along roadsides and in prairies and glades through September. The most noticeable features of the compass plant are striking, big, yellow flowers and a hairy stem that grows up to 8 feet tall. The plant derived its name from the tendency of its bottom leaves to align north and south to maximize exposure to sunlight. Early travelers across the central plains used the plants to help give them direction. Compass plants can be found throughout most of Missouri except the southeast corner of the state.

FEATHERED FASCINATION

Bird Beaks

IMAGINE USING ONLY your lips and mouth to perform all the functions of your mouth, arms and hands. You'd get a sense of how bird beaks, or bills, work.

The beak is part of a bird's skull that is covered with a tough layer of skin. The skin is especially thick at the tip of the beak which, generally, gets the most wear. The bill consists of the upper and lower mandibles. On most birds the upper mandible is perforated by nostrils.

The shape and edges of beaks vary greatly among bird species depending on the species' habitat and diet. For example, a raptor's strong, sharp, hooked beak is designed for tearing apart prey, a duck's bill is flattened with tooth-like edges for straining food out of water and the cardinal's short, thick beak enables it to break open seeds.

While the main purpose of a beak is to obtain food in the easiest and most effective way possible, beaks also perform many of the tasks that mammals use their forearms to do. Grasping and carrying items, scratching, fighting, digging and building nests are among the many other ways birds use their beaks.

Order our free publication *Feeding Backyard Birds* to learn more about attracting birds to your yard. To order, write to MDC, *Feeding Backyard Birds*, P.O. Box 180, Jefferson City, MO 65102 or e-mail pubstaff@mdc.mo.gov.



Great horned owl



Lewis & Clark Water Trail

Your voyage of discovery begins online

Last September, Gov. Matt Blunt announced plans for the Lewis & Clark Water Trail on the Missouri River. You can access information about this new and exciting paddling destination online at www.missouririverwatertrail.org. The trail stretches more than 550 miles, from the Iowa border to the Mississippi River just north of St. Louis. The Web site has resources for planning day trips to month-long voyages of rediscovery in Lewis & Clark's footsteps. Included are sections on river history, navigation, safety and paddling tips. Interactive maps show river accesses, conservation areas, state parks and other facilities.



Protect Missouri Waters

Boaters are critical to zebra mussel control efforts.

The discovery of invasive zebra mussels at Lake of the Ozarks last year has made boat care more important than ever. Zebra mussels cause economic damage and can upset the ecological balance that makes Missouri fishing great. To ensure you don't spread zebra mussels, take these precautions.

- Remove weeds hanging from the boat or trailer and drain water from the motor, live well, bilge and transom wells before leaving a body of water.
- Inspect your boat and trailer, using a flashlight to check recessed areas as well as exterior surfaces.
- Scrape off suspected mussels, however small, and put them in a trash bin away from the water.
- At home, wash the hull, drive unit, live wells, live well pumping system, bilge, trailer, bait buckets, engine cooling system and other boat parts exposed to water.
- If your boat was in infested waters, go to a carwash and use hot, high-pressure spray to "de-mussel."

Missouri Stream Teams monitor lakes and streams for zebra mussels. To help, call 800-781-1989 or visit www.mostreamteam.org.

Stream Team



Lisa Held & Randy Terhune



IN ITS NINE years, Stream Team #1092 has conducted water-quality monitoring, made media contacts, written articles and letters about Stream Team issues, adopted a stream access, recruited members, picked up nearly 4 tons of trash and held or attended dozens of workshops and other educational projects. One of Lisa Held and Randy Terhune's most notable achievements, however, is "paying it forward" by involving youngsters in their efforts.

One of Randy's co-workers, a Girl Scout leader, mentioned that her Junior Scouts were working on a merit badge related to the environment. Before long, they were learning to count and identify aquatic insects as an indirect measure of water quality. They also found themselves out on the Missouri River with Stream Team 1092 taking part in a river clean-up.

"They really thought it was interesting," said Lisa, "even the ones who kind of said 'Eeeouuuu!' about the creepy-crawly things."

Stream Team #: 1092

Date formed: March 23, 1998

Location: Petite Saline Creek, Cooper County

For more info about Stream Teams: www.mostreamteam.org



Our Glorious Forests

DEER RIDGE CA



Size: 6,995.89 acres

Location: Lewis County in northeast Missouri

Importance: Breeding habitat for Indiana bats and neo-tropical migratory songbirds; many recreation opportunities

Things to do: Picnic, bird, use trails, hunt, fish and camp

Online information: www.missouriconservation.org/2930 and search "Deer Ridge"

For more information contact the area manager: 660-727-2955



THE ENDANGERED INDIANA bat (*Myotis sodalis*) finds excellent breeding habitat in one of northeast Missouri's largest forested conservation areas. After hibernating in caves in southeast Missouri, Indiana and Kentucky, many Indiana bats spend the summer at Deer Ridge Conservation Area, where they set up maternity colonies and feed on

nocturnal insects along the North Fabius River. Deer Ridge managers look for ways to improve forest habitat structure for the Indiana bat and other species, including neo-tropical migratory birds, deer, turkey and quail. One strategy they use is promoting snags (standing dead trees), which serve as ideal roost sites for the bats' maternity colonies.

Although Deer Ridge CA appeals to bats, birds and other wildlife, it has many features that people like, too: nearly 20 miles of trails, several campsites, a 48-acre lake, shelters and a shooting range.

Turn Red Cedar Into Cash

Learn how at Springfield workshop.

Explore the challenges and opportunities inherent in managing Eastern red cedar August 9 through 11 in Springfield. Co-sponsored by the Missouri Department of Conservation, the workshop will include courses such as ecology, management, value-added products and marketing. Designed for landowners, foresters and industry, the workshop is \$75 per person. To register or get more information, call the Southwest Missouri Resource Conservation and Development Office at 417-732-6485.



We All Live in a Forest

Don't bring gypsy moths home from vacation.

You probably wouldn't give a hitchhiker a ride, but if you're traveling through states infested with the gypsy moth this summer, you could return with one of Missouri's most unwanted stowaways. Since the 1800s, the oak-leaf-eating gypsy moth has spread slowly from New England as far west as Wisconsin, northeastern Illinois and Indiana. Gypsy moths have not established in Missouri yet, but where they do, they're expected to severely damage our oak forests. To hold the line against gypsy moths, inspect your gear, including your vehicle and camper, before returning home from infested areas. Look for fuzzy egg masses, pupae and moths.

If you find evidence of gypsy moths, notify the departments of Agriculture (573-751-5505) or Conservation (573-751-4115). For help identifying and destroying gypsy moths, visit



www.missouriconservation.org/7280.



Farm bill in action—EQIP

Monitor farm bill program review this summer.

Every year, farm bill conservation programs help thousands of Missouri landowners take care of millions of acres of wildlife habitat. In Benton County, the farm bill's Environmental Quality Incentive Program is helping several landowners improve their farming operations and greater prairie chicken habitat in the Cole Camp/Hi Lonesome Conservation Opportunity Area. EQIP funds have helped this group of landowners develop conservation grazing systems, implement waste and nutrient management plans, and improve their native grass pastures and hay meadows.

Wesley Borchert, who farms with his brother Winston in the conservation opportunity area, was in the process of seeding tallgrass prairie when we caught up with him in May. He is enthusiastic about eradicating fescue and restoring his native grass hayfields. "We like the native prairie hay—it's worth more—and we want to see the quail come back," he said. He also reports hearing prairie chickens boom on his family's land. "One of the things I want to emphasize," Wesley said, "is how good the people are to work with. We've gotten a lot of help from Kevin Ricke at NRCS, and the SWCD folks have really helped with equipment."

Since 2002, \$82 million in EQIP funds have helped more than 5,000 Missouri landowners conserve natural resources and improve habitat. This summer Congress



will review the federal farm bill, which includes many voluntary conservation programs such as EQIP. To keep

an eye on Congress's treatment of farm bill conservation programs, visit www.agriculture.house.gov or www.agriculture.senate.gov.

Stop Mowing Idle Areas

Habitat Hint



Habitat type: Native grasslands, including wildflowers and legumes

Wildlife affected: Upland birds such as quail, indigo buntings and loggerhead shrikes; rabbits

What's at stake: 2007 generation of grassland birds and rabbits

Best practices: Don't mow idle areas and control invasive species such as fescue

Phone contact: To locate a private land conservationist near you, see page 3 for a list of regional office phone numbers.

For more land management information: www.missouriconservation.org/7905

IF MOWING IS one of your favorite summer pastimes, consider this: studies have shown that quail populations double in areas where "recreational" mowing stops. We recommend you learn to love the natural look in your idle areas, which provide cover for quail and other ground-nesting wildlife, such as songbirds and rabbits. Where quail are concerned, a mower should only be used to control weed growth in new shrub or grass plantings. If you limit mowing to your lawn and allow your roadsides and crop borders to go natural, you'll be rewarded in the fall with more quail calls and better hunting.



Archery in Schools Program

Training for educators scheduled for July 17 and 18.

Improved attendance and better behavior are two reasons schools give for participating in Missouri's Archery in the Schools Program, a standardized archery instruction curriculum designed for grades 4 through 12. Many schools also note that students who typically don't perform well in traditional sports enjoy and excel in archery. The program's free educator training and equipment grants take the strain off school budgets for non-traditional activities. The Department of Conservation helps schools qualify for MASP by training educators in basic archery skills. Before a school can qualify for equipment grants, its educators responsible for teaching archery skills must become Basic Archery Instructor certified. This summer Missouri educators can get BAI training at the Department's Outdoor Skills Workshop for Educators July 17 and 18th at the Andy Dalton Shooting Range and Outdoor Education Center in Bois d'Arc. To enroll, please call Greg Collier or Jean Mayer at 417-895-6880. To learn more about archery in the schools, visit www.archeryintheschools.org.



\$15,000 ATA Grant

Advances Missouri's archery education

This spring the Conservation Federation of Missouri and Conservation Department agreed to co-lead the state's archery education efforts. This new partnership qualified Missouri for the National Archery in the Schools program, and yielded a \$15,000 grant from the Archery Trade Association, which supports state members of NASP. The grant will boost the state's ability to train educators and equip schools. "We really appreciate ATA's support of our archery education efforts," said Regina Knauer, the Department's education programs supervisor. Educators who participate in the Department's basic archery instructor training are qualified for equipment grants.

NATURE ACTIVITY



ARCHERY: DAVID STONNER; CAPE GIRARDEAU: CLIFF WHITE

Cape Girardeau Programs



SOUTHEAST MISSOURI features landscapes such as the rare sand prairie, desert-like glades, mysterious marshes with cypress trees and deep green forests. Get acquainted with the Bootheel's diverse landscapes, plants

and animals at the Cape Girardeau Conservation Campus Nature Center. The center offers trails to hike, exhibits to explore and programs to help visitors deepen their connections to the Bootheel's rich natural heritage. Plan to attend the center's Hummingbird Celebration Aug. 18, from 9 a.m. to 4 p.m. A master hummingbird bander will be on hand to band migrating birds as they begin their journey south. Indoor programs will provide tips on attracting hummingbirds, gardening, feeder care and more. Kids, be sure to check out the "fledgling fun" discovery station.

Where: Cape Girardeau's North County Park

Features: Two-mile nature trail, native-plant landscape, exhibit gallery, numerous programs, auditorium, Educator Resource Room and Nature Shop

Upcoming program: Hummingbird Celebration Aug. 18

For more info on activities: 573-290-5218 or www.missouri-conservation.org/2930 and search "Cape"

COUNTING FISH

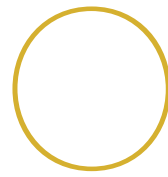
by Greg Stoner



Late-night arithmetic adds up to improved fishing.



CLIFF WHITE



One night in April, two bass anglers on Lake of the Ozarks are pitching jigs and spinnerbaits around sunken brushpiles. Using an electric trolling motor, they quietly make their way around a rocky point and approach a craft with three people in it, all of whom are hovering around a tank in the middle of the boat.

As they get closer, they can hear one person speaking while another seems to be taking notes. They hear subtle splashes as the speaker slips objects over the side of the boat. The anglers then watch as the boat starts its engine and moves to the other side of the cove.

Curious, but still fishing, the anglers are surprised to hear a gasoline generator start and see the area in front of the boat suddenly bathed in bright light. They also notice two people standing in the bow of the boat dipping nets into the water.

They keep an eye on the boat, and when the generator shuts down and the lights go out, they slide up close to the boat to find out what its occupants are doing.

"I'm a fisheries biologist with the Missouri Department of Conservation," the driver responds to their question. "We are conducting our spring electrofishing survey to collect data about the black bass population in the lake."

Fisheries biologists use electroshocking to survey fish populations in Missouri rivers and lakes. Biologists often work at night because many species of fish tend to be closer to shorelines after dark, and the fish are less likely to be spooked by a boat. The fish are only stunned by the electric current and recover quickly.



CLIFF WHITE

Biologists use an electrofishing boat (left) to sample walleye at Stockton Lake. This same sampling method is used for a variety of fish, such as largemouth bass. Information obtained through sampling helps the Department to set regulations that will help to improve our fisheries.

Electrofishing, Trapnets and Hoopnets

Electrofishing works well for counting some, but not all, species of fish. We also use trapnets and hoopnets for surveying populations. What's important is that we collect each species at the same time of the year and using the same method so that we can compare our data with other years.

For example, we survey largemouth bass with electrofishing gear in April and May once the surface water temperature reaches 65 degrees.

Data Mining to Manage a Fishery

In 2001, we found that the bass population in Mossy Lake consisted of a good variety of sizes from small to large with 20 percent of the bass over 15 inches in length. Also in 2001, we collected bluegill at a rate of 250 per hour with few fish measuring longer than 8 inches.

By 2005, few bass were over 12 inches in length, but we found several large bluegill between 8 and 10 inches.

What happened during these five years to cause such a change in the fishery?

Large year-classes of bass produced in 2002, 2003 and 2004 caused an increase in the number of bass in Mossy Lake. During this same period, the relative weight index dropped steadily from 1.2 in 2001 to .80 in 2005. They became skinnier. Bass growth rates also decreased from 13 inches at age 3 in 2001 to 9.5 inches at age 3 in 2005.

This bass population had become overabundant and steadily ate away at the numbers of bluegill. Meanwhile, the decline in bluegill numbers meant less competi-

tion for food for that species, so that the remaining bluegill grew fast and to a large size.

If Mossy Lake anglers are content to catch many small bass, but not many of them over the legal length of 15 inches for harvest, or if they don't mind waiting through slow action for the chance to catch large bluegills, we might not do anything more than

continue to monitor the lake. Angler surveys, however, tell us that there is general discontent with the fishery and we need to take action to improve it.

In this case, a 12- to 15-inch slot limit on bass and an increase in the daily limit of bass from two to four or six may be all that is needed. Anglers could take more bass, but they would not be able to harvest bass between 12 and 15 inches long.

These regulations would improve bluegill production by allowing a bigger bass harvest, reducing the number of bass and permitting more small bluegill to survive.

The new regulations would also provide a great catch-and-release fishery for 12- to 15-inch bass, many of which would find enough food to grow longer than 15 inches, making them eligible for harvest or catch-and-release trophy fishing.

The changes won't happen overnight, but these regulations should steadily improve the fishing in Mossy Lake.

We collect crappie in trapnets in October. We survey channel catfish in the summer by using hoopnets baited with aged, foul-smelling cheese. We set gillnets below wing dikes in the Missouri River during late winter for sturgeon.

Our knowledge of when and how to survey fish populations was not accumulated overnight. Present-day biologists have learned from past efforts how and where to obtain "representative" samples of fish populations.

When possible, a biologist may collect 500 or more fish of a given species to get a representative sample. To be accurate, a sample should contain all sizes of the fish in the population from fingerlings to large adults.

As is the case with any survey, obtaining a good sample provides solid information about the whole population. In the case of fish sampling, the data we collect helps us gain an understanding of the population structure of a species.

For example, we might determine that 25 percent of the fish are less than 12 inches long, 50 percent are between 12 and 15 inches long and 25 percent are longer than 15 inches. By tracking this data through several years we can identify changes in population structure and take action to improve the fishery.

How fast we are able to capture fish—our catch rate—gives us a good indication of relative abundance of a species. Although it is often not possible to determine exactly how many bass, crappie or catfish live in a lake, we can compare catch rates one year to the next to determine whether fish numbers are increasing or decreasing. By comparing catch rates from one body of water to another we can forecast which waters might provide better fishing. Catch rate information also is valuable in helping us set harvest regulations.

Age and Growth

In addition to recording the lengths of fish they catch, biologists often remove a few scales. Fish scales contain rings, much like the rings in the trunk of a tree, allowing biologists to determine a fish's age.

We determine the growth rate of fish by comparing their age to their size. Slow growth in a fish population is often a result of an overpopulation of that species, or a shortage of food. Knowing the growth rate of fish populations helps us make decisions about the fishery.

Catch Rate per Hour in Mossy Lake

BASS		
2001	2003	2005
80	120	175
BLUEGILL		
2001	2003	2005
250	135	92



NOPPADOL PAOTHONG

Anglers also provide valuable data about the state's fisheries by answering questions about their fishing experiences.





Hoopnets are used to collect muskellunge at Pomme de Terre Lake in Hickory County. The large, toothy fish are sedated so that data such as weight and length can be collected before they are released. Hoopnets are used to sample a variety of different fish, such as channel catfish.

Lakes and ponds generally have uneven fish production from year to year. Some years, the number of young may be small because of an abundance of competition from older fish, too many predators or a lack of food.

Natural reproduction of fish in any given year is strongly influenced by the fish already living in a body of water. Strong year-classes occur when conditions are right for lots of young fish to survive. These strong year-classes eventually affect future natural reproduction. Our fish sampling efforts reveal the year-class structure of various species in a body of water and helps us predict how good the fishing might be in future years.

We can also determine habitat conditions by noting the relative weight index of fish for their length. A fish with a relative weight of 1.0 is considered healthy, whereas .85 is on the skinny side

and 1.2 is a fat fish that is finding plenty of food.

Sampling Anglers

During creel surveys, we'll approach anglers and ask them for information about how long they fished and how many fish they caught. This harvest and fishing pressure data, combined with the information from our fish counting and sampling expeditions, gives us a good understanding of the dynamics of a fish population in a body of water.

We need this understanding in order to make adjustments to fish populations through length limits, daily limits, the setting of seasons, stocking and habitat enhancement.

Should you have a late-night encounter with a Conservation Department survey boat, pull over and say hello. We're out there counting, instead of casting, so that we can improve your fishing. ▲

Treemendous Benefits

Ten ways that trees improve the quality of our lives.

by Ann Koenig, photos by David Stonner



Trees give us shade on blistering August afternoons, make cozy dens for families of pileated woodpeckers, yield wood for baseball bats and provide the pulp for the paper on which these words are printed. Almost everyone could make a long list of the many ways trees directly benefit our lives.

It might take a while, however, before they'd think to list relief from stress or increased vitality to our communities. These are just a couple of the social benefits of trees that researchers have identified. The more we study trees, the more we find that there's even more to gain from them than just firewood, lumber and shade.



Trees as Healers

You are lying in bed in the hospital recovering from surgery and turn toward the window for some inspiration. A view of the air conditioner units on the adjacent roof will not provide as much restorative affect as a view of a more natural setting. You may recover from surgery faster if you can see trees outside your hospital window.

A six-year study of post-operative patients with the same type of surgery in the same hospital showed that patients with views of nature were able to be released a day sooner—eight days instead of nine days—than patients with “barren” window views. What’s more, patients with natural views requested less pain medication, and a study of nurses’ notes confirmed those patients generally reported feeling better.

Another study found that inmates with views of farm fields from their cells requested fewer trips to the infirmary than inmates without a “natural” view from their cells.

Trees at Work

Views of nature assist in the workplace as well. A survey of more than 700 employees in private and public sectors assessed job satisfaction

and performance as it relates to views of nature from work stations. Desk workers with views of nature reported almost 15 percent fewer illnesses than those without a view.

Natural views contributed to workers feeling more satisfied, patient and enthusiastic and less frustrated than those whose windows did not provide a view of nature. The more green seen from their windows, the better employees felt. The employees surveyed who had the opportunity to work outside said they felt the most satisfied and least harried.

How is the view from your place of employment? Is there any way to plant some trees?

Revitalizing Downtowns

Planting trees may be one way to turn the vacant storefronts found in many small towns back into thriving businesses. Research suggests trees contribute positively to downtown shopping areas.

A study comparing downtown business districts reveals that people will drive from farther away to shop in tree-lined downtown districts than they will to shop in downtowns without trees. They’ll also spend more time shopping and come back more frequently.

People also are willing to pay more for parking and spend more money on goods and entertainment in downtowns with trees. In fact, downtowns with full-canopy shade trees are perceived as having better character and containing stores with better products and merchants than treeless shopping districts.

People will
drive from
farther away
to shop in
tree-lined
downtown
districts than
they will
to shop in
downtowns
without trees.



DIG DEEPER

Find out more about the social benefits of trees at:

Natural Environments for Urban Populations

USDA Forest Service’s North Central Research Station

1033 University Place, Suite 360, Evanston, IL 60201

847-866-9311

www.ncrs.fs.fed.us/4902/

Center for Urban Horticulture

College of Forest Resources

University of Washington Botanic Gardens

3501 NE 41st Street, Seattle, WA 98105

206-543-8616

www.cfr.washington.edu/research.envmind/

Landscape and Human Health Laboratory

University of Illinois at Urbana-Champaign

Urbana, IL 61801

217-333-1000

www.herl.uiuc.edu/





Road Relaxation

Even at 70 miles per hour people benefit from trees. Long or difficult commutes can contribute to high blood pressure and increased illness rates as well as lower job satisfaction. Researchers tracking stress indicators, such as heart rate and blood pressure, found that driving in areas of strip malls tends to boost the incidence of road rage. However, drivers who enjoy views of nature while on the road report less driving stress.

Stress Relief

Feeling bogged down? Frustrated? Overwhelmed? Plant trees. You'll feel better.

Researchers found that people in housing surrounded by trees and lawn report that their life issues feel less difficult. They also procrastinate less and have higher attention spans than those whose apartment buildings have no grass and trees around them.

Park users in Cleveland reported that urban forests and parks offered more privacy and tranquility than their homes. To escape crowds, work, home routines and associates, they sought

Trees
improve
children's
ability to
concentrate
and their
reasoning
skills.



out heavily forested areas with nearby running water or with unpaved paths. They used such places for reflective thought, resting their minds and thinking creatively.

Trees for Learning

Trees improve children's ability to concentrate and their reasoning skills.

A Swedish study of day care centers found that children attending facilities with natural settings and providing year-round outdoor play under trees had better motor abilities and concentration skills than children at day care centers surrounded by buildings and with less opportunity for outdoor play.

Even the view outside a child's window has been shown to affect development. One study in a public housing project found that girls with views of trees and grass outside their bedroom have more self-discipline and greater concentration skills than those without a good view.

Boys in the housing project did not show the same differences, likely because they were generally allowed more time outdoors.

In another study, three groups of people were tested on their proofreading skills, then tested again. The first group was retested after taking an urban vacation, the second group after going backpacking and the third group without taking a vacation. Only the group who went backpacking showed improved proofreading scores.

A second study showed that those who took nature walks had better proofreading scores than those who walked in urban settings or those who practiced indoor relaxation techniques.

Researchers also report that students with views of trees and grass from their college dormitories reported better attention skills than students with more barren views.

Focusing Attention

One in 14 children and many adults suffer from Attention Deficit Hyperactive Disorder. ADHD symptoms include restlessness, trouble listening, antisocial behavior, aggression and difficulty focusing on tasks.

A nationwide research project assessed how playing in a “green” environment affects the symptoms of this disease. They found that play-

Park users reported that urban forests and parks offered more privacy and tranquility than their homes.



ing outside in natural environments reduces kids’ ADHD symptoms more than indoor play or outdoor play at basketball courts or skate parks. The more green and natural the setting, the more ADHD symptoms were relieved.

One study participant whose son had ADHD reported the only way she found to keep him in school for the entire day without being sent home for behavioral problems was to let him play in a park for a half hour in the morning before school.

Reducing Violence

People in housing surrounded by grass or trees exhibited more than 25 percent less household violence than people in housing surrounded by asphalt and concrete. Researchers theorized that green areas help people cope with stress by encouraging them to socialize and giving them places to relax.

And Crime

A study used police departments’ crime reports to determine that buildings landscaped with trees and lawns had half as many crime reports as buildings without natural landscaping.

The attractiveness of natural landscapes likely accounts for this dramatic reduction. Trees and lawns encourage adults to spend more time outdoors, where their presence and vigilance discourages criminal activity.

Both children and adults reported feeling safer in communities surrounded by green.

Improving Communities

Have you noticed how neighborhoods with trees seem to have lots of folks out strolling in late afternoons? You’ll also see more kids playing on lawns, people barbecuing on patios and folks relaxing or working in their yards.

In a study of public housing projects, researchers found that people living in buildings surrounded by green socialize more with neighbors than those living in buildings with stark landscapes. They also reported a greater sense of community with their neighbors.

For the sake of commuters, the sick, your neighbors, coworkers, children, and the vitality of our down town districts—plant and protect trees. They help us in ways we are only beginning to understand. ▲





JIM RATHER

Troop 87 from Cameron assist senior citizens at a fishing event at Ronald and Maude Hartell Conservation Area.



Scouts have been doing “GOOD TURNS” for conservation for nearly a century.

BY HAROLD A. KERNS

As the story goes, Chicago publisher William D. Boyce was lost in a dense London fog when a young boy offered to help him find his way. After reaching his destination, Boyce offered the boy a tip, but the boy refused the money, saying that he was just doing a “Good Turn” as a Scout.

Impressed by the boy and his fine manners, Boyce sought a meeting with the British founder of the Boy Scouts, Robert Baden-Powell. The next year (1910), Boyce incorporated the Boy Scouts of America. Nearly 100 years later, the organization now has nearly 3 million youth members in its Cub Scouting, Boy Scouting and Venturing programs.



*Fish and Wildlife
Management
Merit Badge*

Conservation has always been a foundation of the Boy Scouting program. In addition to their well-known motto of “Be Prepared,” Boy Scouts have an outdoor code that says, “As an American, I will do my best to be clean in my outdoor manners, be careful with fire, be considerate in the outdoors, and be conservation minded.”



HAROLD KERNS

Matt Henton of Troop 60 of Savannah completed a wood sample display for an Eagle Scout project that is an aid for teaching the differences in color, grain and bark in various tree species.

BECOMING A SCOUT

The Boy Scouts of America has three programs open to youths. They include Cub Scouts, which is designed for boys 7 to 10 years old. Boy Scouts, open to boys 10 to 17 years old, and Venturing, open to boys and girls between 14 and 20 years old who have completed eighth-grade.

All programs provide experiences, challenges and guidance designed to help young people mature into responsible and caring adults.

To become a Scout or to learn more about Boy Scouts of America programs visit www.scouting.org or contact one of the following Boy Scouts Councils in Missouri:

Great Rivers Council (Columbia)—573-449-2561

Greater St. Louis Council—314-361-0600

Heart of America Council (Kansas City)—816-942-9333

Ozark Trails Council (Springfield)—417-883-1636

Pony Express Council (St. Joseph)—816-233-1351

From the very first edition, published in 1910, the Boy Scouts of America handbook has emphasized woodcraft. As part of their development, Boy Scouts learn about nature, develop outdoor skills and gain an appreciation for our natural resources. The program uses hiking, camping and canoeing among its many character-building activities.

Of the 121 different merit badges that Boy Scouts can earn, many have strong conservation connections. These include Environmental Science, Fish and Wildlife Management, Forestry, Soil and Water Conservation, Insect Study, Bird Study and Reptile and Amphibian Study, as well as Hiking, Camping, Shotgun Shooting and Fishing.

SCOUTS AND THE CONSERVATION DEPARTMENT

The Department of Conservation’s *The Next Generation of Conservation* strategic plan has a goal of supporting community conservation efforts and organizations such as the Boy Scouts.

An important aspect of the Scouting program is giving something back to the local community in the form of community service hours. These service projects often involve conservation.

For example, 78 Boy Scouts of America groups have enrolled as Missouri Stream Teams. Their activities include stream litter pick-ups, water quality monitoring and streamside tree planting.

Scouts or Scout troops are involved in many other conservation projects, including tree planting, fish and wildlife habitat improvement, bird house or bird feeder construction and placement, prairie restoration projects and nature trail construction and maintenance.

EAGLE SCOUTS FOR CONSERVATION

All Scouts are required to complete community service hours to advance in rank, but a special community service project is required of a Boy Scout to earn the coveted Eagle Scout rank.

Many young men working toward becoming Eagle Scouts choose conservation projects. One Eagle Scout candidate recently completed a



JIM RATHERT

Making the most of their time at Ronald and Maude Hartell CA in Clinton County, Troop 87 planted trees in addition to assisting senior citizens at a fishing event.



*Soil and Water
Conservation
Merit Badge*

Of the 121
different
merit badges
that Boy
Scouts can
earn, many
have strong
conservation
connections.



*Forestry
Merit Badge*



*Mammal Study
Merit Badge*

OTHER YOUTH GROUPS INVOLVED IN CONSERVATION

Other organizations actively involved in youth conservation education and/or conservation service projects include:

4-H—www.4husa.org or www.national4-hheadquarters.gov

Boys and Girls Clubs of America—www.bgca.org

Campfire USA—www.campfire.org

Girl Scouts of America—www.girlscouts.org

Greenwings of Ducks Unlimited—www.greenwing.org or www.ducks.org

Jakes of National Wild Turkey Federation—www.nwtf.org/jakes

Missouri Stream Teams—www.mostreamteam.org

The National FFA Organization—www.ffa.org



Boy Scouts from Troop 60 in Savannah cut and removed brush on a loess hill prairie.

wood sample display that identifies various tree species. His project is used as a teaching aid to show people the differences in color, grain and bark in various wood samples.

Another Scout's project involved the construction of display boards showing various fishing lures and baits and fishing knots. The displays are used by Conservation Department staff and volunteers when they provide fishing presentations to the public.

Other Eagle Scout candidates have built and placed mourning dove nesting structures on several Northwest Missouri conservation areas. After Eagle Scout Casey Johnson of Troop 60 in Savannah completed his mourning dove nesting project, he said he was happy he had chosen to work on behalf of conservation.

"To a young man in the state of Missouri nothing can be better than the Boy Scouts of America and Missouri Department of Conservation," Johnson said. "BSA gives the young man a chance to learn about life and leadership, and MDC supplies a nice clean setting for these activities."

We can also thank Eagle Scout candidates for fish habitat structures in several Northwest Missouri conservation area lakes, aesthetically pleasing wooden slab benches at the entrance of the Conservation Department's Northwest Regional Office, and for the shade structures at the Kid's Fishing Pond at Lost Valley Fish Hatchery near Warsaw.



Troops from Plattsburg and Gower build picnic tables at Plattsburg City Park.



Members of Troop 31 from St. Joseph install fish habitat structures at the disabled fishing dock at Happy Holler Lake CA in Andrew County.

Wildlife Management Biologist Sean Cleary testifies to the value of the partnership of the Conservation Department and the Boy Scouts of America.

"Local Boy Scout troops have been a good source of volunteer help on state conservation lands," Cleary said. "From trail enhancement projects to creating wildlife habitat, their work benefits the Conservation Department and Missouri citizens."

Other winners in the partnership are the individual Scouts. They get fully involved in their projects and coordinate their work with Conservation Department experts. As they complete their projects, they learn how conservation works on the ground, and they gain a sense of ownership of our natural resources.

The slogan of the Boy Scouts of America is "Do a Good Turn Daily." And, just like the anonymous Boy Scout in the London fog, Scouts have been doing Good Turns for conservation for nearly 100 years. ▲



*Fishing
Merit Badge*

Boy Scouts
learn how
conservation
works on the
ground, and
they gain
a sense of
ownership of
our natural
resources.



*Bird Study
Merit Badge*

Hunting and Fishing Calendar

FISHING

Black Bass (certain Ozark streams, see the *Wildlife Code*)

5/26/07 2/29/08

impoundments and other streams year-round

Bullfrog Sunset Midnight

6/30/07 10/31/07

Gigging nongame fish 9/15/07 1/15/08

Trout Parks 3/1/07 10/31/07

HUNTING

Common Snipe 9/1/07 12/16/07

Coyotes 5/7/07 3/31/08

Crow 11/1/07 3/3/08

Deer

Antlerless 12/8/07 12/16/07

Archery 9/15/07 11/9/07

11/21/07 1/15/08

Muzzleloader 11/23/07 12/2/07

November 11/10/07 11/20/07

Urban Counties (antlerless only) 10/5/07 10/8/07

Youth 10/27/07 10/28/07

Dove 9/1/07 11/9/07

Furbearers 11/15/07 1/31/08

Groundhog 5/7/07 12/15/07

Pheasants

North Zone 11/1/07 1/15/08

South Zone 12/1/07 12/12/07

Youth 10/27/07 10/28/07

Quail 11/1/07 1/15/08

Youth 10/27/07 10/28/07

Rabbits 10/1/07 2/15/08

Ruffed Grouse 10/15/07 1/15/08

Sora and Virginia Rails 9/1/07 11/9/07

Squirrels 5/26/07 2/15/08

Teal (if authorized) 9/8/07 to be announced

Turkey

Fall Archery 9/15/07 11/9/07

11/21/07 1/15/08

Fall Firearms 10/1/07 10/31/07

Woodcock 10/15/07 11/28/07

TRAPPING

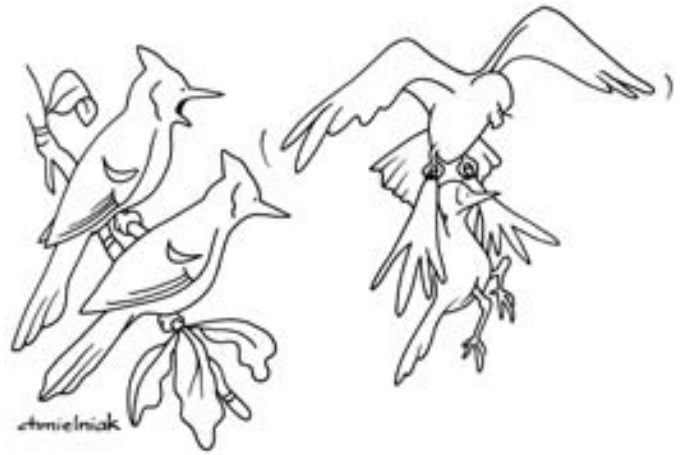
Beaver and Nutria 1/15/07 3/31/08

Furbearers 11/15/07 1/31/08

Otters and Muskrats 11/15/07 see *Wildlife Code*

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest* and the *Migratory Bird Hunting Digest*. For more information visit www.missouriconservation.org/8707 or permit vendors.

The Department of Conservation's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800-392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to www.wildlifelicense.com/mo/.



"They've nabbed the Mockingbird for identity theft!"

Contributors

HAROLD KERNS is an Eagle Scout (1971) and a fisheries regional supervisor in Northwest Missouri. He has worked for the Department for more than 25 years. He is an Assistant Scoutmaster with Troop 60 in Savannah, where he resides with his wife, Laura, and two sons, Zach and Austin. Zach earned the Eagle Scout rank in 2006, and Austin is nearing completion.



ANN KOENIG has worked as a forester for the Conservation Department for 10 years and is a Certified Arborist. She lives in Columbia with the three men in her life (her husband and two young sons) and 36 yard trees all of whom she loves dearly. As an urban forester, Ann helps towns in central Missouri maintain and enhance their community forest.

GREG STONER has been the Department's fisheries management biologist at Lake of the Ozarks since 1991. He also assists landowners with pond-related issues throughout Camden, Miller and Morgan counties. When not at work, Greg spends as much time as possible fishing in the Niangua Arm of Lake of the Ozarks with his wife, Sherri, and his kids, Alex and Katie, who luckily all like to fish.



TIME CAPSULE

July 1957

Sour Water by Robert Hartman told the story of Dodge Creek, a stream that was polluted by strip mining for coal. With the sulfur, iron and other minerals exposed to wind and rain, decomposition soon took place, forming weak solutions of sulfuric acid. The fish that once lived there could no longer breathe when the acid waters came in contact with their gills. Insects were limited to few kinds of water beetles and bottom-dwelling worms. As many said, "the water was sour." Or, in more scientific terms, the water had a pH of 5 and lower. The article also identified other sources of water pollution and encouraged citizens to support Missouri's newly created Pollution Control Board — *Contributed by the Circulation staff*



AGENT NOTES

Youth groups build character as they work on behalf of conservation.

MANY FINE YOUTH organizations in Missouri provide young men and women with opportunities to experience the outdoors.

The Boys Scouts of America includes Cub Scouting, Boy Scouting and Venturing, a program open to both boys and girls. The organization has successfully instilled respect for the outdoors in many generations. Each year, members complete numerous projects that benefit the outdoor community. The benches at your local fishing lake might be compliments of a talented group of Scouts, or you may have used a trail bridge that was an Eagle Scout project.

The 4-H group is another popular youth organization. 4-H members also complete many projects that benefit conservation. They may build wood duck or bluebird nesting boxes, plant trees or perform other habitat improvement projects at conservation areas or on private lands.

I have worked with both of these youth groups on a variety of projects and can tell you that you will not find a better group of young men and women. They are devoted to their projects and respect the outdoors and others.

Whether your child joins 4-H or the Boy Scouts, you can be sure both will build character and teach your child the value of conservation.



Grant Gelly is the conservation agent for St. Francois County, which is in the Southeast region. If you would like to contact the agent for your county, phone your regional Conservation office listed on page 3.

behind the CODE

Bi-state fishing permit for the White River Lakes.

BY TOM Cwynar

The border separating Missouri and Arkansas runs through a lot of water, especially in the White River System.

Anglers fishing Table Rock, Bull Shoals or Norfolk reservoirs could easily cross into another state's jurisdiction without knowing it. Previously, anglers protected themselves by buying permits from both states—one resident permit and one nonresident permit.



The White River Border Lakes Permit allows state's resident permit holders from Missouri or Arkansas to take fish, except trout, from anywhere within the confines of the three reservoirs. The \$10 permit cuts \$30 from the cost of buying annual permits from both states.

Anglers 65 and older and other anglers legally exempted from license requirements need the permit if they fish in the waters of the other state. Youths 15 and under are not required to purchase the permit for most fishing methods. However, like all other anglers, they must have a trout permit to take trout.

The Missouri Department of Conservation and the Arkansas Game and Fish Commission cooperatively manage the fisheries on the lakes. They have agreed upon standardized daily limits and size limits for most species. The differences are in the daily white bass, striper and hybrid limits on the reservoirs and in length limits on spotted bass on Table Rock lake.

Anglers must be in compliance with the rules of the state in which they are located.

“I AM THE NEXT GENERATION OF CONSERVATION”

John Leuken of northern Harrison County is a third-generation cattle farmer. He calls his farm “Rolling Prairie Ranch.” John is currently working on several projects with the Conservation Department and the Natural Resources Conservation Service, such as tree removal and management-intensive grazing to improve grassland bird habitat. To learn more about conservation activities, visit www.missouriconservation.org—PHOTO BY DAVID STONNER



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